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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/631,940	07/30/2003	Savas Gider	HSJ9-2003-0031US1	9652

7590 08/22/2005

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EXAMINER

CAO, ALLEN T

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 08/22/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/631,940

Applicant(s)

GIDER ET AL.

Examiner

Allen T. Cao

Art Unit

2652

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 July 2003.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>7/31/03</u> . | 6) <input type="checkbox"/> Other: _____ |

1. The disclosure is objected to because of the following informalities: Serial Number of an US application Number in page 10, line 16 is missing.

Appropriate correction is required.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-3, 6, 9-11 and 15 are rejected under 35 U.S.C. 102(e) as being anticipated by Macken et al (US. 2004/0075944 A1).

Macken et al discloses a magnetic head 50 having a read head portion (12, 68, 66, 57, 60, 64 and 52) including a insulation base coat layer 52; a write head portion (12, 16, 58, 72, 54, 73, 18', 22) including insulation layers (73 and 18'); and wherein the insulation layer 18' of the write head portion having a negative thermal expansion characteristics (abstract, lines 3-6) as set forth in claims 1, 6, 9 and 15.

(Notes that Applicant claims "one or more insulation layers that are **optional** and, if present, are disposed between the read-head portion and the write-head portion" (emphasis added) in claims 1 and 9 are excluded from the consideration because claims 1 and 9 assert that they are "optional".

Regarding claims 2 and 10, Macken et al discloses that the negative thermal expansion material is selected from either Zirconium tungstate or hafnium tungstate (see [0034]).

Regarding claims 3 and 11, Macken et al discloses that the insulation layer that includes the negative thermal expansion material is a coil insulation layer 18' within the write-head portion.

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 5, 8, 13-14 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Macken et al in view of Kudo et al (US. 2003/0193756 A1).

Macken et al does not disclose a heat transfer layer as recited in claims 5, 8, 13-14 and 17.

Kudo et al discloses a slider having a magnetic head including a heat transfer layer 4.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the magnetic head of Macken et al with a heat transfer layer as set forth, supra as taught by Kudo et al.

The rationale is as follows: One of ordinary skill in the art would have been motivated to provide the magnetic head of Macken et al with a heat transfer layer as set forth, supra as taught by Kudo et al to dissipate the heat generated in the magnetic

head/slider and a temperature rise can be inhibited, thus improve the read/write output characteristics of the head.

6. Claims 4, 7, 12 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Macken et al in view of Santini (US. 6,560,853 B1).

Macken et al discloses only a single layer of coils. Macken et al, however, does not disclose two layers of inductive coils as recited in claims 4, 7, 12 and 16.

Santini discloses a magnetic head having a write head portion including two layers of inductive coils (212, 214) and at least an insulation layer (11-14) disposed between the induction coil layers.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify one layer coils of the write head of Macken et al with two layers of coils as set forth, supra as taught by Santini.

The rationale is as follows: One of ordinary skill in the art would have been motivated to to modify one layer coils of the write head of Macken et al with two layers of coils as set forth, supra as taught by Santini because two smaller diameter coils can produce the same flux density as a single coil, with less reluctance; wherein, less reluctance permits a faster rise time of the signal which results in a faster data rate, thus provide a better write characteristics of the write head.

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Allen T. Cao whose telephone number is (571) 272-7569. The examiner can normally be reached on Mon - Thurs (7:30 - 6:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T. Nguyen can be reached on (571) 272-7579. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Allen Cao
Primary Examiner

AC
August 10, 2005